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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,536	01/23/2004	Sang Woon Suh	1740-000044/US	4973
30593 7590 01/15/2010 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER				
LANIER, BENJAMINE				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/762,536

**Applicant(s)**

SUH ET AL.

**Examiner**

BENJAMIN E. LANIER

**Art Unit**

2432

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3, 4, 7, 13-16 and 19-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 7, 13-16, 19-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment filed 03 December 2009 amends claims 1, 7, 13, 19, 24, 30, and 36. Applicant's amendment has been fully considered and entered.

### *Response to Arguments*

2. Applicant argues, "Even if the Examiner were to further divide the key information area 501 of Nagai into first areas 505 and second areas 504, Nagai nowhere teaches that the number of keys includes 'control information required to reproduce/record the main data,' which claim 1 as amended recites is stored in a 'second data field area.'" This argument is not persuasive because Nagai discloses that descramble key area 505 (Figure 5) includes the descramble keys that would be required to reproduce encrypted data.
3. Applicant argues, "The Examiner replies to Applicant's previous argument that Timmermans and Kim cannot modify 'the copy protection indicating information and the copy protection information' in Nagai as 'being recorded in a wobbled pattern by a bi-phased modulation method' by saying that Applicants failed to provide evidence that such modification is not possible or renders Nagai inoperable...MPEP § 2145, Applicant may come forward with **argument or evidence** rebutting the Examiner's assertions of obviousness, and that the Examiner must consider and reply to such arguments." In response, Examiner would like to point out that MPEP 2145 states that "arguments of counsel *cannot take the place of factual supported objective evidence.*"
4. Applicant argues, "if either the key number or keys of Nagai are themselves recorded in a wobbled pattern as in Timmermans, there is no teaching of how Nagai would obtain either the

keys or key number from the wobbled pattern or use the same in a decrypting function.” This argument is not persuasive because only the key number information (figure 5, 504) would be recorded in the wobbled pattern by a bi-phased modulation method. The reading of the key number information would be read in the manner discussed by Kim (Col. 2, line 25 - Col. 3, line 18) for reading data recorded in a wobbled pattern by bi-phased modulation in a manner that reduces the interference that could hinder accurate restoration of recorded data.

5. Applicant argues, “the operating principle of Nagai is at least changed, and probably destroyed, by the modification of Timmermans.” This argument is not persuasive because Applicant has failed to provide any evidence of how the operating principle of Nagai would be changed.

6. Applicant argues, “Nagai always, in every embodiment, has a recording medium with encrypted data that requires at least one key to be present in order to decode the data.” This argument is not persuasive because Nagai discloses (Col. 12, lines 24-41) that the medium includes scramble control information (407) which is “a flag for showing *whether or not the main data has been scrambled...*” If Nagai always has a recording medium with encrypted data, why does Nagai include the scramble control information flag? One skilled in the art would recognize that this flag indicates (using a binary value) if the data stored on the disc is encrypted or not encrypted. Therefore, when the disc includes unencrypted data, the number of keys stored (Figure 5, 504) would equal zero because there is no encrypted data stored on the disc. If there is no encrypted data stored on the disc, then there are no decryption keys stored on the disc.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 2432

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1, 3, 4, 7, 13-16, 19-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not support the amended claim language that requires the copy protection indicating information to be included with control information that is required to reproduce/record the main data.

*Claim Rejections - 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 3-4, 7, 13-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai, U.S. Patent No. 6,938,162, in view of Timmermans, U.S. Patent No. 5,737,286, and

further in view of Kim, U.S. Patent No. 7,266,074. Referring to claims 1, 7, 13, 15, 24, 30, Nagai discloses an optical disc recording system wherein encrypted content is recorded on a disc such that a key management area for decrypting the content is stored in a lead-in area of the disc (Figure 1, 107 & Col. 16, lines 14-15), which meets the limitation of recording the main data based on the copy protection information. The key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of a lead-in storing copy protection indicating information indicating if the computer readable medium contains the copy protection information in the first data field area or if the computer readable medium does not contain the copy protection information in the first data field area, the first data field area being separated from the second data field area, the copy protection information being encryption/decryption key information required for use in encrypting/decrypting the main data, The number of keys is included in the content information area (Figure 5, 502) along with the key list pointer, which meets the limitation of wherein the copy protection indicating information being included within at least one control information unit including control information required to reproduce/record the main data, the at least one control information unit being recorded in a second data field area in the lead-in area of the computer readable medium, the first data field area being separated from the second data field area, and the copy protection information being present depending on the indication of the copy protection indicating information. Nagai does not disclose that the key management information is recorded in wobbled pattern by a bi-phased modulation method. Timmermans discloses a digital storage system wherein an encrypted data file is stored on an optical disc with a

decryption key stored in the track wobble (Col. 7, lines 9-14), which meets the limitation of the copy protection information being recorded in wobbled patterns, the reproducing includes detecting modulated data and detecting the copy protection information using the modulated data if the recording medium contains copy protection information for use in encrypting/decrypting the main data based on the copy protection indicating information. It would have been obvious to one of ordinary skill in the art at the time the invention was made to record the key management information of Nagai in the track wobble of the optical disc in order to aid in the digital file recovery process as taught in Timmermans (Col. 7, lines 9-12). Timmermans does not specify recording in the wobbled pattern using bi-phased modulation method. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the wobble pattern recording of Timmermans to be performed using bi-phased modulation in order to prevent the wobble signal from being degraded due to cross talk from the wobbles of adjacent tracks as taught by Kim (Col. 9, lines 16-22).

Referring to claims 3, 4, 14, 16, 25-29, 31-35, Nagai discloses that the key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of the copy protection indicating information signifies to reproduce the main data directly without utilizing the copy protection information if the copy protection indicating information indicates the computer readable medium does not contain copy protection information, the copy protection indicating information signifies to reproduce the main data based on the copy protection information if the copy protection indicating information indicates the computer readable medium contains copy

protection information, determining whether the copy protection indicating information is active if the copy protection indicating information is detected, reproducing the main data directly if the copy protection indicating information is not active, and detecting the copy protection information and reproducing the main data utilizing the detecting copy protection information if the copy protection indicating information is active, reproducing includes decrypting the main data utilizing the copy protection information, the main data may be recorded utilizing the copy protection information if the recording medium contains copy protection information for use in encrypting/decrypting the data, or the main data may be recorded directly without utilizing the copy protection information, if the recording medium does not contain copy protection information for use in encrypting/decrypting the main data, the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium does not contain copy protection information, wherein the recording records the main data without encryption, the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium contains copy protection information, but a value of the copy protection information indicates that copy protection information is not present, wherein the recording records the main data without encryption, the recording medium contains copy protection information for use in encrypting/decrypting the main data when the copy protection indicating information indicates the recording medium contains copy protection information and a value of the copy protection information indicates that copy protection information is present, wherein the recording records the main data encrypted utilizing the copy protection information, encrypting the main data



utilizing the copy protection information proceeds recording of the data, decrypt the main data utilizing the copy protection information.

Referring to claims 19, 36, Nagai discloses an optical disc recording system wherein encrypted content is recorded on a disc such that a key management area for decrypting the content is stored in a lead-in area of the disc (Figure 1, 107 & Col. 16, lines 14-15). The key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of detecting the copy protection indicating information indicating if the recording medium contains the copy protection information in the first area or if the recording medium does not contain the copy protection information in the first area, the copy protection indicating information and the copy protection information being recorded, the copy protection information being encryption/decryption key information required for use in encryption/decrypting the main data, The number of keys is included in the content information area (Figure 5, 502) along with the key list pointer, which meets the limitation of the copy protection indicating information being included within at least one control information unit including control information required to reproduce/record the main data, the at least one control information unit being recorded in a second data field area in a lead-in area of the recording medium, the first data field area being separated from the second data field area, and the copy protection information is present depending on the indication of the copy protection indicating information. The decryption keys are used to access encrypted data on the disc (Figure 11), which meets the limitation of playing the main data utilizing the copy protection information if the recording medium contains copy protection information for use in

encrypting/decrypting the main data, or playing the main data directly without utilizing the copy protection information, if the recording medium does not contain copy protection information for use in decrypting the main data, based on the detected copy protection indicating information, a signal processor configured to process the main data utilizing the copy protection information if the recording medium contains copy protection information for use in encrypting/decrypting the main data, or is configured to process the main data directly without utilizing the copy protection information, if the recording medium does not contain copy protection information for use in decrypting the main data based on the copy protection indicating information. Nagai does not disclose that the key management information is recorded in wobbled pattern by a bi-phased modulation method. Timmermans discloses a digital storage system wherein an encrypted data file is stored on an optical disc with a decryption key stored in the track wobble (Col. 7, lines 9-14), which meets the limitation of the copy protection information being recorded in wobbled patterns. It would have been obvious to one of ordinary skill in the art at the time the invention was made to record the key management information of Nagai in the track wobble of the optical disc in order to aid in the digital file recovery process as taught in Timmermans (Col. 7, lines 9-12). Timmermans does not specify recording in the wobbled pattern using bi-phased modulation method. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the wobble pattern recording of Timmermans to be performed using bi-phased modulation in order to prevent the wobble signal from being degraded due to cross talk from the wobbles of adjacent tracks as taught by Kim (Col. 9, lines 16-22).

Referring to claims 20-22, 37-39, Nagai discloses that the key management area within the lead-in area includes the number decryption keys recorded in the lead-in area and the actual

decryption keys that are used to decrypt the encrypted content (Figure 5 & Col. 12, line 53 - Col. 13, line 7), which meets the limitation of the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium does not contain copy protection information, the recording medium does not contain copy protection information for use in encrypting/decrypting the main data if the copy protection indicating information indicates the recording medium contains copy protection information, but a value of the copy protection information indicates that copy protection information is not present, the recording medium contains copy protection information for use in encrypting/decrypting the main data when the copy protection indicating information indicates the recording medium contains copy protection information and a value of the copy protection information indicates that copy protection information is present.

Referring to claims 23, 40, Nagai discloses that the decryption keys are used to access encrypted data on the disc (Figure 11), which meets the limitation of said playing includes decrypting the main data utilizing the copy protection information.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN E. LANIER whose telephone number is (571)272-3805. The examiner can normally be reached on M-Th 7:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Benjamin E Lanier/  
Primary Examiner, Art Unit 2432